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Abstract

The respcnses of 2852 Pennsylvanian urban male high schccl scphcmcres are used tc investigate the relaticnship between adclescent occupational and educaticnal aspiraticns and expectaticns and parental educaticnal discrepancies, and between educaticnal expectaticns and crdinal pcsiticn. The mcbility orientaticns cf both middle- and working-class adolescents are fcund tc be respcnsive tc educaticnal differences between parents, with maternal educational superiority having a greater incremental effect cn mcbility orientaticns than paternal educational superiority. Educaticnal expectaticns are fcund tc vary inversely with ordinal pcsiticn, although the relaticnship is ccnditicned by social status and family size. Fcr college intentions ordinal pcsiticn acccunts for less variance than dces social status cr family size. (EM)

PARENTAL EDUCATIONAL DISCREPANCIES AND ORDINAL POSITION AS STRUCTURAL SOURCES OF ADOLESCENT MOBILITY ORIENTATIONS

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ABSTRACT

The responses of 2852 urban male high school sophomores are used to explore more fully the relationship between adolescent occupational and educational aspirations and expectations and parental educational discrepancies, and between educational expectations and ordinal position.

The mobility orientations of both middle and working-class adolescents are found to be responsive to educational differences between parents, with maternal educational superiority having a greater incremental effect on mobility orientations than paternal educational superiority.

Educational expectations are found to vary inversely with ordinal position at the zero-order level of analysis. Controls for social status and family size indicate, however, that the relationship is a conditional one. These controls also indicate that for college intentions ordinal position accounts for less varianc than does social status or family size.

PARENTAL EDUCATIONAL DISCREPANCIES AND ORDINAL POSITION AS STRUCTURAL SOURCES OF ADOLESCENT MOBILITY ORIENTATIONS

INTRODUCTION

Numerous studies have established linkages between adolescent mobility orientations and such variables as values,[1] independence and achievement training practices,[2] parental educational encouragement,[3] and the like. But, as Perucci aptly notes in his recent synthesis of the literature, the confirmation of relationships between the mobility orientations of youth and such social psychological variables as values, encouragement, etc., is only part of the story. This is because these variables themselves have their origin within specific group contexts, contexts which serve as much to generate inducements or constraints upon the mobility orientations of the adolescent as they do to channel and transmit those inducements or constraints.[4] This paper focuses upon the family as one such group context and within that context examines the relationship between adolescent mobility orientations and: (1) educational discrepancies between the parents, (2) birth order of the adolescent.

DESIGN

A precoded questionnaire was administered in 1963 to the 6000 students enrolled as sophomores in all public and parochial secondary schools in six middle-size (population 50,000 to 100,000) Pennsylvania cities. The following analyses are based on data from 2852 respondents, representing 94 percent of all male students surveyed.[5]

ADOLESCENT CAREER ORIENTATIONS AND PARENTAL EDUCATIONAL DISCREPANCIES

The role of maternal status superiority as a source of "ambition" for offspring has been noted by a number of writers. Its historical importance is attested to by Israel who attributes to maternal status superiority some of the mobility aspirations of 16th century England. He writes that:

> Much of this excess aspiration had been brought on unwittingly by Henry VII in the 1530's when he closed the convents as part of his nationalization of the English branch of the Roman Catholic Church. Previously, younger daughters who could not find husbands of comparably high status often became nuns. Deprived of this alternative, they began more and more to marry beneath their station. * * * Through these women's influence on their children, the confidence, aspirations and pretensions of gentility were diffused downward to the humblest strata.[6]

More recently, Floud, et. al. report that for their English sample:

> The mothers of successful [i.e., those 10-11 year olds who get into grammar schools] working-class children moreover had frequently followed an occupation "superior" to that of their husbands.[7]

Several interpretations have been accorded this phenomenon. Citing the work of Warner and Abegglen, Lipset and Bendix attribute the phenomenon to a tendency for maternal status superiority to create marital disharmony and for marital disharmony to create high achievement motivation in children. They write:

> The childhood experiences of lower-status men who later become business leaders often show a pattern of strong mothers and weak fathers, and an emotionally unsatisfying family life. If it is assumed that a situation in which the mother has higher social

> status than the father is likely to result in this pattern of intrafamily relations, then families in which the mother had a higher occupational status than the father before marriage should result in higher mobility.[8]

Such an interpretation is consistent with the findings of Blood and Wolfe who report that maternal educational superiority does indeed tend to create marital dissention.[9] And, if we speculate that dissentions between husband and wife are likely to create dissentions between parents and child, then such an interpretation is consistent with the findings of Dynes, Clarke, and Dinitz that adolescent mobility aspirations are facilitated by unsatisfactory parent-child relationships.[10]

Blood and Wolfe's study of the correlates of maternal educational superiority among their 909 Detroit area families provides two additional interpretations of this phenomenon. Observing that the husbands of educationally superior wives were themselves more occupationally "ambitious," than spouses of educationally equal or inferior wives, they rhetorically asked to what extent this could be attributed to the tendency for (a) "ambitious" men to marry upward, or (b) educationally superior wives to use their fathers (the probable source of their own superior status) as mobility role-models whom they desired their husbands to emulate.[11] We shall refer to Blood and Wolfe's first interpretation as the "selection" argument and extend it to children by speculating that such "ambitious" husbands may also be fathers with high career goals for their sons. We shall refer to their second interpretation as the "integenerational comparison" argument and extend it by speculating that perhaps educationally superior wives, as mothers, establish their own fathers as the mobility role-model for their children to emulate rather than their own status-inferior husbands. Consistent with this second interpretation are Cohen's data on working-class

boys where she finds that 80 percent of those with white-collar maternal grandfathers planned on college compared with 42 percent of those with blue-collar maternal grandfathers.[12]

A fourth interpretation, and perhaps the most frequently cited one, is that of "status compensation." Allison Davis puts it this way:

> A lower-middle class woman who marries a man from the upper part of the working-class usually begins to try to recoup her original social status either by reforming her husband's behavior to meet lower-middle-class standards or by seeking to train and propel her children toward the status she once had.[13]

None of these four interpretations, all of which are post-hoc and none of which, to the knowledge of this writer, have ever been empirically validated, can be said to be mutually exclusive. To cite an extreme hypothetical example, it is plausible that an "ambitious" man may marry upward, for a while set high career goals for his own children, fail in his own ambitions, this failure creating status frustrations for his wife, who then ceases to use him as the mobility role model for their children, replacing him with her own father, all of which creates dissention in the family, all of which contribute to high ambitions among the offspring.

Previously published literature on the relationship between adolescent mobility orientations and parental status discrepancies is limited essentially to what we shall term the realistic level of educational orientations and has not provided data adequate to compare the effects of maternal status superiority with those of paternal status superiority. Thus, Cohen's previously mentioned study was restricted to the effects of intergenerationally-based maternal status superiority on adolescent educational <u>plans</u>, or, as we shall define it, <u>expectations</u>. Similarly, Krauss' study of 706 San Francisco Bay Area high school seniors is restricted to the effects of status discrepancies on educational <u>expectations</u> or <u>plans</u>.[14] Using the percentage of respondents

planning to go to college as his criterion variable, Krauss reported a general but not unequivocal support for the hypothesis that maternal educational superiority produces high educational plans in adolescents. One of the exceptions to the hypothesis was that in the working-class, maternal educational superiority did not enhance the educational plans of adolescents from families where the father had not completed high school. Krauss was also confronted with the problem of small cell n's, a problem which did not permit him to make reliable comparisons of the effects of maternal educational superiority.

While data from this study are not adequate to test empirically the various interpretations of the mobility orientation-status discrepancy relationship listed above, they are adequate to examine the relationship between parental status discrepancies and the idealistic and the realistic levels of adolescent educational and occupational career orientations and to compare the effects of maternal status superiority with those of paternal status superiority. The idealistic level of a career orientation, often termed an aspiration, refers to the post-high school occupational or educational goal the respondent would really like to achieve were there to be no constraints on his mobility resources, e.g., finances, etc. Since responses to an aspiration item, in theory at least, are made without reference to the adequacy of mobility resources, variations in the idealistic level can be interpreted as indicating the extent to which career goals are influenced by what Rosen, Hyman and others have referred to as "achievement values," or by what Merton has termed the "success theme."[15] The realistic level, often termed as expectation, refers to the level of a post-high school educational or occupational goal the respondent actually expects to achieve, given whatever constraints there are upon his mobility resources. Variations in the realistic level can be interpreted as indicating the extent to which career goals are influenced not only by achievement values or the success ethos, but by the

availability of mobility resources as well.[16] The relevance of this distinction for the analysis of the consequences of parental status discrepancies on adolescent mobility orientations lies in ascertaining whether this structural variable has an incremental effect on both aspirations and expectations or only on aspirations. A finding that parental discrepancies have an incremental effect on aspirations but not on expectations could be interpreted as indicating that this variable serves as a source of values conducive to upward mobility but not as a source of the resources necessary to achieve those orientations. A finding that status discrepancies have an incremental effect on both aspirations and expectations could be interpreted as indicating that this variable constitutes both a source of values conducive to upward mobility and of the mobility resources necessary to achieve those orientations.

For this particular study, aspirations have been measured with the following items:

> SUPPOSING you could have the necessary abilities, grades, money, etc., how far would you <u>really</u> LIKE TO go in school? [Respondent was asked to check one of six fixed response categories ranging from 10th - 11th grade through graduate or professional school]
>
> SUPPOSING you could have the necessary abilities, education, grades, money, etc., what kind of work would you <u>really</u> LIKE TO do after you finish your education? [Respondent was asked to write a specific occupational title]

Expectations were measured with these two items:

> CONSIDERING your abilities, grades, financial resources, etc., how far do you <u>actually</u> EXPECT TO go in school? [Same fixed response categories as for the educational aspiration item]
>
> CONSIDERING your abilities, grades, financial resources, chances for technical school, college, etc., what kind of work do you <u>actually</u> EXPECT TO do after you finish your education? [Respondent was asked to write a specific occupational title]

Responses to the educational items were coded: 16 or more years of education, 14 years of education, 12 or less years of education. Responses to the occupational items were coded with the Hollingshead seven category

occupational scale component of the Two Factor Index of Social Position.[17] For clarity of presentation in the multivariate tables, data are presented only for the "high" levels of educational and occupational orientations, i.e., educational orientations to 16 or more years of school, occupational orientations to professional or managerial positions (Hollingshead categories 1 - 3).

Parental status discrepancies are based on differences between the educational attainment of each parent as reported by the respondent. The educational attainment of each parent was measured with a fixed-response question and then coded with the Hollingshead seven category educational scale component of the Two Factor Index. For the analysis reported in this paper, each parent has been classified into one of three categories: 13 or more years of education, exactly 12 years of education, and 11 or less years of education. This system yields a nine-by-nine matrix with the off-diagonal cells representing the discrepancy categories. Socioeconomic status is controlled in the analysis with the Hollingshead seven category occupational scale component of the Two Factor Index. Data are based on the father's occupation as reported by the respondent. Two status categories are used: (1) middle, consisting of Hollingshead occupational categories 1 - 4 (primarily white-collar), (2) working, consisting of categories 5 - 7 (blue-collar). The complete Two Factor Index, based on a weighted composite of father's occupational and educational scale scores, was not used to operationalize the control variable of status because its educational component would produce a measure of status directly confounded with one of the two independent variables, education of father. "No responses" to one or both of the parental educational items, due primarily to incomplete families, reduced the total number of cases included in the analysis by 10.9 percent from 2852 to 2542.

Table 1 presents the data for each of the four criterion variables by education of each parent within each of the two status categories. Table 2

extracts from Table 1 cell values for all possible combinations of parental educational discrepancies and shows percentage comparisons for each condition of maternal and paternal educational superiority. Of the 24 comparisons, 18

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Tables 1 - 2 about here
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are in the predicted direction, i.e., maternal educational superiority produces higher career orientations than does paternal educational superiority. Of the six exceptions, five occur in the category of 12 and 11- years of education. Perhaps this reflects a tendency for high school graduation to be a major educational dividing line in American society and consequently for the society in general and the affected spouses in particular to attribute less significance and import to an educational difference of one year when that difference is between mates neither of whom have gone beyond high school than when one mate has "crossed" the dividing line and achieved some form of post-high school education. That four of these five exceptions occur among middle rather than working status parents may be an indication that few if any wives who have completed only high school would view a husband with 11 or less years of education who holds a white-collar occupation as being their status "inferior." The sign test for k related samples[18] was used to assess the null hypothesis that higher career orientations occur under maternal educational superiority equally as often as under paternal educational superiority. With 18 of the 24 comparisons in the predicted direction, the null hypothesis can be rejected at the .05 level, one-tail test. It is also worth noting, contrary to Krauss' finding, that maternal educational superiority produces high educational orientations in the working-class regardless of the educational level of the father. Tables 3 and 4 extend the analysis of what may be termed the "marked educational discrepancy" category, i.e., 13+ and 11- years,

by comparing with the mean percent for each of the two status categories the

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Tables 3 - 4 about here
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percentage of respondents expressing high educational and occupational orientations under these conditions of maternal and paternal educational discrepancies. From an inspection of Tables 3 and 4, comparing the percentage of respondents expressing high educational or occupational orientations with the mean for the entire status category, it can be seen that whereas all eight maternal educational superiority percentages are greater than the respective status means, this is true of only five of the paternal superiority percentages. More importantly, of the eight comparisons, six of the maternal superiority-status mean differences exceed ten percentage points, compared with none of the paternal superiority-status mean differences. Also, it is to be noted that in all cases the percentage of respondents expressing high career orientations is greater under the maternal superiority than under the paternal superiority condition. This suggests that the effect of status discrepancies is not an additive function of years of parental education but is an interactive function of years of parental education and sex-role, i.e., that one unit of maternal educational superiority yields a greater increment in adolescent career orientations than does one unit of paternal educational superiority.

From these data, then, we would conclude, tentatively, that parental status discrepancies in the form of maternal educational superiority create a group context conducive to the generation and transmission of values and resources facilitative of upward educational and occupational mobility orientations among working and middle status adolescents.

ORDINAL POSITION AND EDUCATIONAL EXPECTATIONS

The discussion thus far has focused on the association of adolescent career orientations with what can be termed an external determinant of the family context, i.e., parental status discrepancies. We now turn to the examination of an internal determinant of the family context, ordinal position, and its relationship with one form of adolescent career orientation, educational expectations. The realistic level of an educational orientation has been selected as the dependent variable both for conservation of space and because one of the prime interests in this analysis is the comparison of differences in the relationship of birth order to intended college enrollment from this sample with actual college enrollment data from other samples. Two control variables are used in the analysis: (1) social status, measured with the complete Hollingshead Two Factor Index of Social Position, and (2) family size. Both family size and ordinal position were measured with an item which requested the respondent to write in his own age and the ages of each of his brothers and sisters.

One of the most comprehensive summaries of the literature on the correlates of ordinal position is Altus' article "Birth Order and Its Sequalae" in a recent edition of Science.[19] With respect to the relationship between various forms of achievement and ordinal position, the studies cited by Altus show that:

1. Aptitude and intelligence scores are negatively associated with ordinal position but that the association appears to be a conditional one. Altus refers to the work of Nichols which indicates that scores on the National Merit Scholarship examinations were inversely related to ordinal position. This was not true for students of all ability levels, however, but only for those from the top ability level, i.e., the Merit Finalists, those who survived

the first round of testing.[20] Concerning intelligence, Altus notes the research of Terman on "gifted" children in which he found first-borns to be overrepresented. As with the Merit scholars, however, these "gifted" children were a select segment of the population, i.e., the less than 1 percent with IQ's of 140 or more.[21] Investigating the intelligence-ordinal position association on the somewhat less select population of University of California undergraduates, Altus' own research shows that while first-borns scored slightly higher than succeeding borns on tests of verbal intelligence, no such relationship was evident for quantitative ability until sex of siblings and family size was controlled, in which case first-borns scored higher only if they were from two-child families where the younger sibling was a male.[22]

2. Eminence appears to be related to ordinal position, first-borns being overrepresented when compared with succeeding borns. Supporting evidence comes from the studies of Galton, Huntington, Jones, Roe, and others who have found that among men of scientific and artistic distinction, first-borns are overrepresented in comparison with succeeding borns, in many cases, regardless of family size.[23] However, Altus also refers to the works of Ellis, Cattell, Clarke, and Apperly which indicate that among men of distinction both first and last borns are overrepresented when compared with intermediate borns, although in most cases the overrepresentation appears to favor the oldest over the youngest.[24]

3. College enrollment is associated with ordinal position, first-borns being found in higher education more frequently than chance alone would indicate. Referring to data from other investigations, as well as his own, Altus finds that for those universities studied, first-borns from any family size were overrepresented.[25] Interestingly, he reports that in his own study of students on the Santa Barbara campus, last-borns were the most underrepresented ordinal position, a contrast to some of the previously mentioned findings on

eminence and birth-order.[26]

Schachter has also studied the college-enrollment - ordinal position relationship. Using data from secondary, undergraduate, and graduate schools, he finds that:

> In a random sample of the general population, there is no birth-order effect. In high school, which is compulsory, there is no effect. In college, there is a marked effect, and in graduate school the effects of birth-order [first-borns over succeeding borns] are even stronger.[27]

Interestingly, Schachter invokes this finding as an interpretation of the eminance - ordinal position relationship. He suggests that this association essentially reflects the fact that scholars, eminent or not, traditionally have come from a college population in which first-borns have been in marked surplus.[28]

Finally, Rosen has studied the association between achievement motivation and ordinal position. On the basis of data from 8 - 14 year old boys, he found, contrary to his hypothesis, that among working-class children mean achievement scores were highest for the youngest and lowest for the oldest subjects, regardless of family size. Among middle-class children, mean achievement scores were highest for the oldest children only in medium-size families. In the large-size family, the highest mean scores were recorded for the intermediate born with the lowest scores by the youngest. In the small-size family, the youngest children had the highest mean achievement scores with the oldest children the lowest.[29] Such a lack of consistency led Rosen to conclude that the data show:

> How perilous it is to speak about the relationship of birth order to achievement without taking into account the influence of family size and social class.[30]

He also concludes that social class and family size separately account for more of the variance in achievement motivation than does ordinal position.[31]

The question of "why" there is an association between these several forms of achievement and ordinal position has been the subject of considerable speculation. Huntington espoused a physiological interpretation when he conjectured that first-borns are overrepresented among men of eminence because first-borns tend to be physically stronger and healthier than succeeding borns.[32] Altus and Rosen propose a social-psychological interpretation predicated upon the differential parental treatment accorded children as a function of their birth order.[33] Thus, Rosen observes that compared with succeeding borns, the first-born is: (1) the sole object of parental attention until siblings arrive; (2) likely to experience an overestimation of his abilities because the parents lack a comparison standard; (3) likely to be more intensely socialized with adults and thus be more "adult-oriented" than are succeeding borns who are more likely to be "peer-oriented" and, (4) typically the object of more achievement training than are succeeding borns.[34] Drawing on his study of the sociometric structure of fraternities and sororities in which he found that first-borns were considerably less popular than succeeding borns, Schachter proposes a more psychological interpretation. He speculates that with little else to do, first-borns may simply spend more time with their books, get better grades,[35] and hence be more likely than succeeding borns to go to college. We will amplify this interpretation by suggesting that academic achievement, as expressed in grades and in the pursuit of higher education, may serve as a compensation for perceptions of rejection or non-popularity by others and that inasmuch as first-borns tend to be less popular they seek to compensate their sense of interpersonal inferiority by the pursuit of scholastic superiority.

Regretably, again, as with the maternal educational superiority relationship, we are not able to provide an empirical test of these interpretations. We can, however, use our data to regress the analysis of the achievement - ordinal position relationship one step farther back in the temporal sequence than has been done previously and ascertain whether a larger percentage of first-born high school male sophomores express college expectations than do succeeding borns. In doing so, we shall control for family size and for social status. An inspection of the "Totals" column in the "Summary" section of Table 5 indicates that with no controls, first-borns are more likely than

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Table 5 about here
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succeeding borns to express college expectations, the difference being greatest between first and intermediate borns (18 percentage points), less between first and last borns (8 points), and least between first and second borns (7 points). The control for family size alters this ordering in one respect; namely, that in the family sizes 3-4, and 5+, last-borns are tied with second-borns as the category expressing the second highest percentage of college expectations. Controlling for ordinal position and varying family size, the Summary section reveals, consistent with Rosen's finding for achievement motivation, that differences in family size appear to account for more of the variance in the dependent variable than do differences in ordinal position. Interestingly, also, there is virtually no difference in the dependent variable between "only" children and first-borns from a family size of two.

Focusing now upon each of the two status categories in Table 5, we can see that although the single control for status does not alter the original finding that first-borns are the <u>most</u> likely and intermediate borns the <u>least</u> likely to express college expectations, it does alter the ordering for second and last borns. Thus, while that ordering in the working-status

category remains the same as the ordering without the control for status, i.e., second-borns being somewhat more likely than last-borns to express college expectations, in the middle-status category it is the last-borns who are somewhat more likely than second-borns to report college plans.

Additional differences in the ordering of the dependent variable by ordinal position occur when comparisons within each family size are made with and without the control for status. One notable difference is that for family size 3-4 in the middle-status category, the highest percent of college expectations is expressed not by the first-borns but by the last-borns, i.e., 64 vs. 73, and the lowest percent occurs not among the intermediate but among the second-borns, i.e., 67 vs. 60. It should be stated, however, that this is the only exception in the two status categories where first-borns do not exceed succeeding borns in the percentage reporting college plans.

Reference to differences in the dependent variable as a function of each of the three predictor variables suggests the same ordering of these three variables with respect to educational expectations as that found by Rosen for achievement motivation; namely, (1) social status, (2) family size, and (3) ordinal position.

In concluding the analysis of the relationship between college expectations and ordinal position, we are led to two provisional observations. First, in addition to being consistent with Rosen's ordering of the predictor variables in terms of their importance in accounting for the variance in the dependent variable, the data are consistent with his observation of how perilious it is to speak about the relationship of birth order to achievement without taking into account the influence of family size and social class.[36] Further comparisons with Rosen's data, especially a comparison of interactions, is inhibited by the fact that no association between educational expectations and

achievement motivation has yet been reported.[37] Second, a comparison of the percentage differences in college expectations by ordinal position from these data with the percentage differences in actual college enrollment by ordinal position from Altus' Santa Barbara data indicates that ordinal position accounts for considerably more variance in actual rather than in intended college enrollment. Thus, while Altus reports a percentage difference of 26 points between first and second born matriculants from the two child family, 63 and 37 respectively, our data show a difference of only three points, 48 and 45 respectively. Similarly, while Altus reports a difference of 47 points between first and intermediate born matriculants from the 3-4 child family, 51 and 4 respectively, our data show a difference of only six points, 41 and 35 respectively.[38] Such differences between percentage differences would seem to indicate a positive trend, over time, in the power of ordinal position as a determinant of this form of educational achievement. Consistent with this inference is Schachter's finding that overrepresentation of first-borns in high school is nill, in college noticable, and in graduate school marked.[39]

Speculatively, such a trend could be attributable, at least in part, to two factors. First, as high school students, first-borns may be more likely than succeeding borns to persist in their college expectations. This is predicated upon two assumptions: (a) that as a symbol of educational achievement such persistence partially compensates the first-born for his perceived sense of self-inadequacy in interpersonal relations; (b) that because of his higher intelligence and better grades,[40] in comparison with succeeding borns, the first-born is more likely to be encouraged by parents, teachers, and others to pursue a college education.[41] Second, while because of the preceding set of circumstances first-borns may be more likely than succeeding borns to apply for college admission, we suggest that among all

who apply, first-borns are more likely than succeeding borns to be accepted, in part because of their higher intelligence and better grades. Finally it should be noted that the magnitude of any such high school-college trend in the effect of ordinal position may be a function of the quality of the college involved in the comparison. Relevant here is the interpretation Altus gives to data indicating that first-born undergraduates are more over-represented at Reed College and Yale University than at the University of Minnesota:

> The difference in percentages may be a function of the degree of selectivity exercised by the various institutions--the more stringent the standards for admission, the higher the percentage of first-borns. This inference is based . . . upon what has been found in the realm of aptitude testing. If the inference proves to be correct, then public junior colleges should have the lowest percentage of first-borns, since in most states, if not all, their entrance requirements are least stringent.[42]

The relationship, then, between educational achievement and ordinal position is a complex one. It is a relationship the degree and direction of which appears to be conditioned by, among other variables, family size, social status, grade level of the subjects, quality of college or university, and, we may add, the age and sex composition of the subject's siblings. To the extent that our speculation regarding the trend in the increasing power of ordinal position to account for the variance in educational achievement is valid, to that extent those who study the determinants of the college intentions of adolescents will want to include birth order in their designs primarily for purposes of intellectual curiosity. Those who study the determinants of actual college enrollment, however, will want to include birth order in their designs out of predictive and explanatory necessity.

SUMMARY

With data collected from 2852 urban Pennsylvania male high school sophomores, we have shown that maternal educational superiority produces an incremental effect not only in the educational expectations of adolescents, but also in their educational aspirations and in their occupational aspirations and expectations as well.

By showing that first-borns were somewhat more likely than succeeding borns to express college expectations, we have also provided some degree of confirmation for the finding reported in a number of previous studies that first-borns are higher achievers than succeeding borns. It is true, however, at least for this sample, that the educational expectation - ordinal position relationship, in addition to being rather complex, added little to our ability to explain and predict the educational goals of adolescent males.

What the discussions accompanying the maternal educational superiority and the ordinal position analyses both evidenced was the necessity for an empirical testing of the several interpretations which have been attributed to each of those two relationships. While we do not fully agree with Tolman that "A theory is a set of intervening variables,"[43] we do suggest that the interpretation of these two relationships by the specification of relevent intervening variables and the empirical substantiation thereof would, in and of itself, render an important contribution to sociological theory.

TABLE 1

PERCENTAGE OF RESPONDENTS REPORTING EDUCATIONAL ORIENTATIONS TO COLLEGE, OCCUPATIONAL ORIENTATIONS TO PROFESSIONAL - MANAGERIAL POSITIONS, BY FAMILY SOCIAL STATUS AND PARENTAL EDUCATIONAL LEVEL

(in percentages)

Family Social Status	Adolescent Career Orientation		Education of the Father in Years: 13 or more; Educ. of Mother (in years): 13 or more	12	11 or less	Education of the Father in Years: 12; Educ. of Mother (in years): 13 or more	12	11 or less	Education of the Father in Years: 11 or less; Educ. of Mother (in years): 13 or more	12	11 or less
Middle[a]	Educational	Aspiration	93	82	80	89	77	69	90	66	66
		Expectation	81	68	65	71	56	41	70	35	34
	Occupational	Aspiration	92	80	71	86	77	71	93	70	67
		Expectation	77	65	55	70	56	49	70	47	40
	(Number of Respondents)		(183)	(191)	(49)	(70)	(277)	(98)	(30)	(108)	(119)[c]
Working[b]	Educational	Aspiration	83	71	53	63	60	48	57	51	41
		Expectation	52	45	30	46	36	21	43	24	19
	Occupational	Aspiration	74	72	60	74	64	60	67	62	47
		Expectation	39	48	30	50	40	37	59	32	27
	(Number of Respondents)		(23)	(58)	(40)	(46)	(273)	(162)	(49)	(288)	(478)[c]

[a]Hollingshead Occupational Categories 1 - 4
[b]Hollingshead Occupational Categories 5 - 7
[c]Does not total 2852 because subjects not responding to the independent variables have been excluded. Such no responses constitute 310 cases or 10.86% of the total sample.

TABLE 2

COMPARISON OF THE EFFECTS OF PARENTAL EDUCATIONAL DISCREPANCIES ON ADOLESCENT EDUCATIONAL ORIENTATIONS TO COLLEGE, OCCUPATIONAL ORIENTATIONS TO PROFESSIONAL - MANAGERIAL POSITIONS, BY FAMILY SOCIAL STATUS AND PARENTAL EDUCATIONAL DISCREPANCY

(in percentages)

Family Social Status	Parental Educational Level	Percentage of Respondents Reporting High:[a] Occupational Aspirations		Occupational Expectations		Educational Aspirations		Educational Expectations	
		Mat. Sup.[b]	Pat. Sup.	Mat. Sup.	Pat. Sup.	Mat. Sup.	Pat. Sup.	Mat. Sup.	Pat. Sup.
Middle[c]	13+ and 12 yrs.	86	80	70	65	89	82	71	68
	13+ and 11- yrs.	93	71	70	55	90	80	70	65
	12 and 11- yrs.	70 [e]	71	47 [e]	49	66 [e]	69	35 [e]	41
Working[d]	13+ and 12 yrs.	74	72	50	48	63 [e]	71	46	45
	13+ and 11- yrs.	67	60	59	30	57	53	43	30
	12 and 11- yrs.	62	60	32 [e]	37	51	48	24	21

[a]High = Educational orientation to college, or, Occupational orientation to professional-managerial position
[b]The abbreviation "Sup." stands for "Superiority," e.g. "Mat. Sup." is where the mother's education exceeds that of the father, "Pat. Sup." is where the father's education exceeds that of the mother.
[c]Hollingshead Occupational categories 1 - 4
[d]Hollingshead Occupational categories 5 - 7
[e]Direction of data opposite that predicted

TABLE 3

THE EFFECT OF "MARKED" PARENTAL EDUCATIONAL DISCREPANCIES ON ADOLESCENT EDUCATIONAL ORIENTATIONS TO COLLEGE, BY FAMILY SOCIAL STATUS

(in percentages)

Family Social Status	Adolescent Educational Orientation	Parental Educational Discrepancy: Mother 13+ Father 11-	Parental Educational Discrepancy: Father 13+ Mother 11-	Difference: MES - PES[c]	Mean % Per Status Category	Differences: MES minus Category Mean	Differences: PES minus Category Mean
Middle[a]	Aspirations to College	90	80	10	78	12	02
	Expectations to College	70	65	05	57	13	08
	(Number of R's)	(30)	(49)				
Working[b]	Aspirations to College	57	53	04	49	08	04
	Expectations to College	43	30	13	26	17	04
	(Number of R's)	(49)	(40)				

[a] Hollingshead Occupational Categories 1 - 4
[b] Hollingshead Occupational Categories 5 - 7
[c] MES = Maternal Educational Superiority
PES = Paternal Educational Superiority

TABLE 4

THE EFFECT OF "MARKED" PARENTAL EDUCATIONAL DISCREPANCIES ON ADOLESCENT OCCUPATIONAL ORIENTATIONS TO PROFESSIONAL - MANAGERIAL POSITIONS, BY FAMILY SOCIAL STATUS

(in percentages)

Family Social Status	Adolescent Educational Orientation	Parental Educational Discrepancy: Mother 13+ Father 11-	Parental Educational Discrepancy: Father 13+ Mother 11-	Difference: MES - PES[c]	Mean % Per Status Category	Differences: MES minus Category Mean	Differences: PES minus Category Mean
Middle[a]	Aspirations to Pro-Mg. Pos.[d]	93	71	22	77	16	-06
	Expectations to Pro-Mg. Pos.	70	55	15	58	12	-03
	(Number of R's)	(30)	(49)				
Working[b]	Aspirations to Pro-Mg. Pos.	67	60	07	56	11	04
	Expectations to Pro-Mg. Pos.	59	30	29	33	26	-03
	(Number of R's	(49)	(40)				

[a] Hollingshead Occupational categories 1-4
[b] Hollingshead Occupational categories 5-7
[c] MES = Maternal Educational Superiority
[d] PES = Paternal Educational Superiority
Pro-Mg. Pos. = abbreviation for Professional - Managerial Positions.

TABLE 5

PERCENT OF RESPONDENTS REPORTING EDUCATIONAL EXPECTATIONS TO COLLEGE, BY ORDINAL POSITION FAMILY SIZE, AND FAMILY SOCIAL STATUS

Family Social Status	Birth Order	Family Size 1	2	3-4	5+	Totals
Middle[a] (I-III)	1st	70 (109)	70 (127)	64 (149)	55 (47)	66 (432)
	2nd		62 (109)	60 (92)	55 (31)	60 (232)
	Intermediate			67 (18)	48 (46)	53 (64)
	Last			73 (44)	46 (22)	64 (66)
	Totals	70 (109)	66 (236)	64 (303)	51 (146)	63 (794)
Working[b] (IV-V)	1st	36 (212)	39 (299)	31 (325)	23 (133)	33 (969)
	2nd		38 (242)	27 (219)	20 (82)	31 (543)
	Intermediate			26 (62)	16 (211)	18 (273)
	Last			29 (199)	24 (70)	28 (269)
	Totals	36 (212)	38 (541)	29 (805)	19 (496)	30 (2054)
Summary (I-V)	1st	47 (321)	48 (426)	41 (474)	31 (180)	43 (1401)
	2nd		45 (351)	37 (311)	29 (113)	39 (775)
	Intermediate			35 (80)	21 (257)	25 (337)
	Last			37 (243)	29 (92)	35 (335)
	Totals	47 (321)	47 (777)	39 (1108)	27 (642)	39 (2848)

[a]Hollingshead ISP social classes I-III
[b]Hollingshead ISP social classes IV-V

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37. See especially Bernard C. Rosen, "The Achievement Syndrome: A Psychocultural Dimension of Social Stratification," American Sociological Review, (April, 1956), pp. 203-211. Rosen writes: "It was found that the individual's value score, but not his motivation score, is related to educational aspiration." p. 209.

38. Data for this comparison involved this author's recomputation of Altus' data by combining his information for family size 3 and family size 4 into one category, family sizes 3-4. This was necessary for purposes of comparability of data presentation in this paper.

39. Schachter, op. cit., p. 764.

40. The relationship of school grades to birth order is reported by Schachter on the basis of data collected in a Minneapolis public high school. He found that "at each family size the grades for first-born students are somewhat better than the mean grades of their later-born compatriots." Schachter, ibid., p. 766.

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